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(54) NONCONTACT IC MEDIA AND SYSTEM APPLIED WITH SAME

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a portable telephone radio device for which noncontact IC media are usable.

SOLUTION: The noncontact IC media 20b are molded in a coin shape and carried in a replaceable state on the portable telephone radio device 110. The portable telephone radio device 110 is provided with a media holder 111, a radio transmitting and receiving circuit including an antenna 112, and a control circuit for read control and write control over digital information to and from the recording area of both the noncontact IC media 20b in the media holder 111 and external noncontact IC media 20a through the radio transmitting and receiving circuit, and a processor which processes information according to read digital information is provided when necessary.

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CLAIMS

[Claim(s)]

[Claim 1] Non-contact IC media which embed the non-contact IC module which has a record section for recording the digital information in which computer reading is possible to the sheet-like medium of a predetermined configuration, change, and are characterized by the thing of this sheet-like medium which the pasting member which cannot be exfoliated exists after attachment in the whole surface section at least.

[Claim 2] Non-contact IC media which embed the non-contact IC module which has a record section for recording the digital information in which computer reading is possible to the sheet-like medium of a predetermined configuration, change, and are characterized by the thing of this sheet-like medium which the pasting member in which re-attachment is possible exists after exfoliation in the whole surface section at least.

[Claim 3] Non-contact IC media according to claim 1 to which two or more said non-contact IC modules are embedded to the sheet-like medium of one sheet, and a field including an each non-contact IC module and said pasting member's

existence part is characterized by cutoff being possible in a specific configuration.

[Claim 4] They are the non-contact IC media which embed the non-contact IC module which has a record section to the sheet-like medium of a predetermined configuration, and change. The information which human being can check by looking is describing in the surface section of said sheet-like medium. The digital information including the contents corresponding to the information concerned in which machine reading is possible is recorded on said record section. In the flesh-side surface part of the sheet-like medium concerned Non-contact IC media characterized by the pasting member for sticking oneself on the location where a predetermined digital information reader can read said digital information having fixed.

[Claim 5] Non-contact IC media characterized by embedding the non-contact IC module which has a record section for recording digital information at least to the stick-like medium of structure with which a stick form case can be equipped.

[Claim 6] Non-contact IC media which have the solid-state mold module medium of the predetermined configuration embedding the non-contact IC module which is the non-contact IC media of the solid-state mold supported by media support, and has a record section, and are characterized by forming in one the engagement device in which the engagement and balking to said media support

are permitted only by its location displacing to this solid-state mold module medium.

[Claim 7] Non-contact IC media according to claim 1 or 5 which allot the conductive member for making the contact of an external electronic circuitry flow to the surface section of said non-contact IC module, and form a contact mold IC loading card when supported by said hollow of the card medium which has the hollow of the same configuration as said media support.

[Claim 8] The non-contact reader writer which has the control circuit which performs the read-out control and write control of digital information to the record section of the both sides of external non-contact IC media which are in the land-cover of the non-contact IC media supported by said media support and said antenna through the media support for supporting the non-contact IC media which have a record section, the wireless transceiver circuit containing an antenna, and this wireless transceiver circuit, and have a record section.

[Claim 9] The non-contact reader writer according to claim 8 characterized by embedding said antenna on the case components located between said supported non-contact IC media and said external non-contact IC media.

[Claim 10] The media support for supporting the non-contact IC media which have a record section, The 1st wireless transceiver circuit which communicates to non-contact through the 1st antenna between the non-contact IC media

supported by this media support, The 2nd wireless transceiver circuit which communicates to non-contact through the 2nd antenna between the external non-contact IC media which have the record section of said digital information, The non-contact reader writer which has the control circuit which performs alternatively the read-out control and write control of digital information to the record section of said non-contact IC media or said external non-contact IC media through said 1st wireless transceiver circuit or the 2nd wireless transceiver circuit.

[Claim 11] The non-contact reader writer which has the control circuit which performs alternatively the read-out control and write control of digital information to one record section of two or more non-contact IC media supported by said media support through the media support which can support to coincidence two or more non-contact IC media which have a record section, the wireless transceiver circuit containing an antenna, and this wireless transceiver circuit.

[Claim 12] The non-contact reader writer which has the control circuit which performs alternatively the read-out control and the write control of digital information to the record section of the non-contact IC media which suit said operating condition through two or more wireless transceiver circuits containing the antenna which operates on conditions different, respectively from the media support which can support two or more non-contact IC media which have a

record section, and these wireless transceiver circuits among two or more non-contact IC media supported by said media support.

[Claim 13] The media support of the ejector half which can support to coincidence two or more non-contact IC media which have the record section of digital information on the same flat surface, The wireless transceiver circuit containing the antenna arranged in the specific location which becomes parallel to said media support, It has the displacement device in which carry out the variation rate of said media support on said flat surface, and the specific thing of two or more of said non-contact IC media is brought close to said specific location. The non-contact reader writer characterized by transmitting and receiving digital information between this specified non-contact IC media and said antenna.

[Claim 14] The media support which can support to coincidence two or more non-contact IC media which have the record section of digital information, The R/W device support which carried the media R/W device including an antenna and a wireless transceiver circuit, The non-contact reader writer which has the displacement device in which carry out the variation rate of said R/W device support, and the specific thing of two or more of said non-contact IC media is brought close to said antenna, and is characterized by transmitting and receiving digital information between specific non-contact IC media through said antenna.

[Claim 15] It is the non-contact reader writer according to claim 13 or 14 which said media support changes including the tabular holder which can support said two or more non-contact IC media to coincidence at intervals of predetermined, and is characterized by said displacement device being a thing to which specific non-contact IC media and said specific antenna are made close.

[Claim 16] The non-contact reader writer of either [which is characterized by realizing the same function as the function given to the non-contact IC media concerned based on the digital information recorded on said supported non-contact IC media] claim 8 thru/or the either of 15 given in a term.

[Claim 17] The non-contact reader writer according to claim 16 which has further an information processing means to perform information processing based on the digital information read through said control circuit, and is characterized by recording the information processing result by this information processing means on said digital information's read-out origin.

[Claim 18] The non-contact reader writer according to claim 16 characterized by holding in the card medium used in the information processor which carried the card reader writer with said non-contact IC media.

[Claim 19] The media support for supporting the non-contact IC media which have a record section in the pocket communication device carrying a display, enabling free exchange, The wireless transceiver circuit containing the antenna

embedded at the equipment case and this wireless transceiver circuit are led. The control circuit which performs the read-out control and write control of digital information to the record section of the both sides of the non-contact IC media supported by said media support and the external non-contact IC media in the land-cover of said antenna, Information processing based on said read digital information is performed. The pocket communication device characterized by having the information processing means made to record on the record section of said supported non-contact IC media or said external non-contact IC media through said control circuit while displaying information on said display as a result of the information processing.

[Claim 20] Said control circuit is a pocket communication device according to claim 19 characterized by receiving alternatively the digital information sent from two or more external non-contact IC modules, and accumulating the received digital information in said supported non-contact IC media.

[Claim 21] The single or two or more non-contact IC media on which the image data outputted to sound-source data and this sound-source data by cooperating in the pocket communication device which carried the display and the sound generation device was recorded, The media support supported for said single or two or more non-contact IC media, enabling free exchange, The wireless transceiver circuit containing the antenna of a case embedding mold and this

wireless transceiver circuit are led. The control circuit which reads said sound-source data and image data from either record section of the non-contact IC media supported by said media support and the external non-contact IC media in the land-cover of said antenna, The pocket communication device characterized by having an information processing means to provide the display controller which displays an image on said display based on the sound-source controller which makes said sound generation device reproduce a sound based on said read sound-source data, and said read image data.

[Claim 22] The pocket communication device which transforms into the charge power of constant value the power component which received transmitted electricity in the pocket communication device which can be driven with a dc-battery through the coil for receiving a power component by non-contact from the exterior, and this coil, and is characterized by having the charge circuit which charges said dc-battery using the changed charge power.

[Claim 23] The media support supported for the single or two or more non-contact IC media on which digital information was recorded, enabling free exchange, The wireless transceiver circuit containing the antenna embedded at the equipment case, the control circuit which reads digital information from the record section of the non-contact IC media supported by said media support through said wireless transceiver circuit, The pocket communication device

equipped with a means to reproduce the read digital information; The media issue equipment and; which record said digital information corresponding to predetermined value information on said non-contact IC media, and publish it are included. The information transfer system characterized by the ability of the class of digital information which should be recorded on said non-contact IC media to choose it as arbitration according to said value information.

[Claim 24] Said media issue equipment is an information transfer system according to claim 23 characterized by being constituted so that said digital information corresponding to the same value information may be updated periodically.

[Claim 25] The information transfer system according to claim 23 characterized by being the fixed publication report information that said digital information contains alphabetic data.

[Claim 26] The information transfer system according to claim 23 characterized by said digital information being digital contents.

[Claim 27] The wireless transceiver circuit containing the antenna of the non-contact IC media and; case embedding mold with which the digital information which the guidance information which human being can check by looking describes in the surface section, and expresses the contents corresponding to the guidance information concerned to an internal record

section, and in which machine reading is possible was recorded, The control circuit which reads digital information from said non-contact IC media through said wireless transceiver circuit, The information transfer system characterized by said non-contact IC media being scattered in two or more applicable parts, respectively including a pocket communication device and; equipped with a means to reproduce the read digital information.

[Claim 28] The information transfer system according to claim 27 characterized by embedding said two or more non-contact IC media on the same guidance panel by which guidance information was drawn.

[Claim 29] The media support supported for a single or two or more non-contact IC media, enabling free exchange, The wireless transceiver circuit containing the antenna of a case embedding mold, It consists of two or more pocket communication devices which have the control circuit which performs the read-out control and write control of digital information to the record section of the both sides of the non-contact IC media supported by said media support through this wireless transceiver circuit, and the external non-contact IC media which exist in the land-cover of said antenna. Each pocket communication device is an information transfer system characterized by being constituted so that the recording information of said non-contact IC media can be exchanged for other pocket communication devices and mutual through said wireless

transceiver circuit.

[Claim 30] The information transfer system of either [which is characterized by said pocket communication device being a cellular-phone walkie-talkie] claim 23 thru/or the either of 29 given in a term.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] (a) is the front view of the sheet with which the front view of the sheet with which two or more formation of the circular non-contact IC media was carried out, and (b) formed two or more non-contact IC media of a plug mold.

[Drawing 2] It is the appearance perspective view of the non-contact IC media of a stick type.

[Drawing 3] It is the explanatory view of the engagement device in which the engagement and balking to a media holder are permitted only by its location displacing, and (a) is an explanatory view in which the front view of the media engagement device by the side of a media holder and (b) show the explanatory view of the engagement device by the side of a module medium, and (c) shows a busy condition.

[Drawing 4] It is the block diagram of the 1st operation gestalt of a non-contact reader writer.

[Drawing 5] It is the block diagram of the 2nd operation gestalt of a non-contact reader writer.

[Drawing 6] It is the block diagram of the 3rd operation gestalt of a non-contact reader writer, and is an example in case the number of antennas is one.

[Drawing 7] It is the block diagram of the 3rd operation gestalt of a non-contact reader writer, and is an example in case the number of antennas is two.

[Drawing 8] It is the block diagram of the 4th operation gestalt of a non-contact reader writer, and is an example in case the number of antennas is one.

[Drawing 9] It is the block diagram of the 4th operation gestalt of a non-contact reader writer, and is an example in case antennas are coin mold media and the same number.

[Drawing 10] It is the block diagram of the 5th operation gestalt of a non-contact reader writer, and (a) - (d) is drawing having shown the structure of the non-contact reader writer which chooses a specific thing among two or more coin mold media, and is made into the object of data R/W.

[Drawing 11] It is the block diagram of the 6th operation gestalt of a non-contact reader writer, and (a) - (c) is drawing having shown the structure of the non-contact reader writer which chooses a specific thing among two or more

coin mold media, and is made into the object of data R/W.

[Drawing 12] It is the block diagram of the 7th operation gestalt of a non-contact reader writer, and the important section block diagram of a non-contact reader writer with which the important section block diagram of a non-contact reader writer carried in the cellular-phone walkie-talkie to which (a) operates with a dc-battery, and (b) are carried in charging equipment, and (c) are the busy condition explanatory views at the time of charge.

[Drawing 13] It is the block diagram of the 8th operation gestalt of a non-contact reader writer, and drawing in which (a) and (b) showed the structure of a PC card where a non-contact reader writer was carried, and (c) are the explanatory views of the use gestalt of the PC card.

[Drawing 14] It is the explanatory view having shown the busy condition of the image recording card of a digital camera which carried the non-contact reader writer.

[Drawing 15] It is the appearance perspective view of a cellular-phone walkie-talkie which carried in one the non-contact reader writer shown in drawing 4 or drawing 5 .

[Drawing 16] It is the conceptual explanatory view having shown an example of the use gestalt of a cellular-phone walkie-talkie.

[Drawing 17] It is the conceptual explanatory view having shown other use

gestalten of a cellular-phone walkie-talkie.

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<66///&N0001=346&N0552=9&N0553=000020" TARGET="tjitemdrw"> drawing

18] It is the sectional view of a cellular-phone walkie-talkie in which the non-contact reader writer which can accumulate two or more coin mold media was carried.

[Drawing 19] It is the sectional view of a cellular-phone walkie-talkie in which the non-contact reader writer which could accumulate two or more coin mold media, and was equipped with two or more antennas was carried.

[Drawing 20] It is the appearance perspective view of the cellular-phone walkie-talkie with which two or more coin mold media could be arranged in juxtaposition, and the antenna carried one non-contact reader writer.

[Drawing 21] It is the appearance perspective view of the cellular-phone walkie-talkie with which two or more coin mold media could be arranged in juxtaposition, and the antenna carried the non-contact reader writer of coin mold media and the same number.

[Drawing 22] It is the structure-of-a-system Fig. which changes a report like a newspaper, a weekly magazine, and a monthly into digital information, and provides a user with it while updating periodically.

[Description of Notations]

1a, 1b Sheet embedding a non-contact IC module

1c The stick medium embedding a non-contact IC module

10, 11, 12, 13, 20, 20a, 20b Non-contact IC media

10 Engagement Device by the side of Media

31 Media Engagement Device by the side of Media Support

21, 42, 42a, 42b, 65 Antenna

22, 43, 43a, 43b, 66 Transceiver circuit

23 Control Circuit

24 45 Memory

40, 50, 55-58, 60, 70, 80, 85, 91, 95, 98 Non-contact reader writer

41, 51, 52, 61, 71 Media support

44 Control Section

46 External Interface Circuitry

47, 47a, 47b Power feed zone

48, 48a, 48b Clock feed zone

63 76 Displacement device

81 Charge Circuit

110-150,210 Cellular-phone walkie-talkie

200 Fixed Publication Report Issue System

220 Media Issue Equipment

223 Money Injection Device

224 Input/output Interface

225 Menu Display

226 Report Specification Section

227 Data Base Manager

228 Information Records Department

229 Media Issue Device

DB Report database

ICC Noncontact IC card

D1 Electronic equipment which carried the non-contact reader writer

J1 Charging equipment of electronic equipment